Section 1 **MANAGEMENT OF CHANGE (MOC)**

ABU:	Plant:	Year:
D&R	JHT	2011

MOC No:	Originator:	Date Issued:	Passport No:	EWO No:
23794	Wallace, Hannah R.	8/3/2011		

Section 2 Reviewer:	MOC Category:	PSM:	MOC Type:	Expiration Date:	Other Temporary Reason
Reyes, Lorraine	Project		Permanent		

Project/Equipment Title: Change JHT Depressuring Valve (36HV021) to be Fail Open

Description of Change:

JHT depressuring valve (36HV021) needs to be changed from fail closed to fail open upon loss of air in order to meet best practices standards and in order to match the original MOC (11069).

MOC will be required if the change will:

- ☐ Cause the use of different feed, chemicals or catalysts?
- ☐ Cause the use of different process conditions, process control, instrumentation, and protective devices or affect upstream/downstream plants?
- ☑ Cause the use of new or modified equipment [which is other than inkind]?
- ☐ Alter equipment siting, building, trailer locations, roads or fire protection?
- ☐ Require modifying existing and/or developing new procedures?

Section 2

☑ Simultaneously Begin Construction and Start-up

Stage 1	Pre-Implementation	Dept./Person Responsible	Date Complete	Completed By	References
	Design Review				
	Process Engineering Review	Wallace, Hannah R.	8/3/2011	Wallace, Hannah R.	
	Instrumentation Review	Jauregui, Samuel	8/10/2011	Jauregui, Samuel	
	Control System Review				
	Utilities Review				
	Environmental/Regulatory Review	Elliott, Brad B.	8/3/2011	Elliott, Brad B.	
	Safety/Regulatory Review				
	Building Permits Review	Tuma, Dennis A.	8/3/2011	Tuma, Dennis A.	
	Mechanical Review				
	Inspection Review				
	Metallurgy Review				
	Contruction Review				
	Leak Seal Review				
	Relief System Review				
	Infrastructure Review				
	PHA/HSE Review	Peterson, Paul M.	8/15/2011	Peterson, Paul M.	

Authorization to Implement Change (Begin Construction): Approver: Peterson, Paul M. Date: 9/8/2011

Stage 2	Pre-Startup	Dept./Person Responsible	Date Complete	Completed By	References
	Procedures Review	Nelson, William	#########	Nelson, William	
	Communication/Training 2	Jennings, Brian L.			
	Pre Start-up Safety Review	Reyes, Lorraine			

Authorization to Start-Up Change: Approver: Date:

Extension of Temporary Change Approved By:

Approver:	Expiration Date:	Extention Reason

Stage 3	Post-Startup	Dept./Person Responsible	Date Complete	Completed By	References
	Communication/Training				
	Process Safety Information				

Change in Place - Reviews, Documentation & Testing Complete

Approver:	Date:

MOC Cancelled:

Approver: Date:

Cancellation Reason:

Note 1: Emergency request for change should be routed by the Approver on the next working day

Retain Original in Division for five Years

PROCESS ENGINEERING REVIEW CHECKLIST

You have been assigned a Process Engineering Review.
This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number 23794
Filing Reference
Person Responsible Wallace, Hannah R.
Completed By Wallace, Hannah R.
Date Completed 8/3/2011

Project/Equipment Title:

Change JHT Depressuring Valve (36HV021) to be Fail Open

DOCUMENTATION

- ☐ Drafting Work Requisition, MFG-5545
- ☐ Maximum Intended Inventory Update
- ☐ MSDS's
- ☑ PED Records
- ☐ Relief System Drawings

PROCESSES REVIEW

- ☐ ASTM-TBP-EFV Distillation Relationships
- ☑ BIN Best Practice
- ☐ Characterization of Petroleum Fractions
- ☐ Composition & Flow Information
- ☐ Conversion Factor & Constants
- ☐ Delivery Needs
- ☐ Densities
- ☐ Fundamental Properties
- ☐ Honeywell
- ☐ Honeywell Process Simulator
- ☐ Material & Energy Balance
- ☐ New Catalyst of Feeds
- ☐ Operating Parameters
- ☐ Physical Properties of Streams or Catalysts
- ☐ Solubilities
- ☐ Suppliers' Performance
- ☐ Surface Tensions
- ☐ Thermal Properties
- ☐ Upstream & Downstream Impacts
- ☐ Vapor-Liquid Equilibria
- ☐ Vapor Pressures
- ☐ Viscosities

SUMMARY OF REVIEW*

36HV021 was intended to be fail open from MOC 11069 and PSI shows the valve to be fail open, however a field V&V showed the vavle to be fail closed. PED supports changing the valve to fail open based on BIN best practice and BIN leader recommendation.

*When possible include copies of documents referenced in the summary.

INSTRUMENTATION REVIEW CHECKLIST

You have been assigned a Instrumentation Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number 23794
Filing Reference
Person Responsible Jauregui, Samuel
Completed By Jauregui, Samuel
Date Completed 8/10/2011

Project/Equipment Description:

JHT depressuring valve (36HV021) needs to be changed from fail closed to fail open upon loss of air in order to meet best practices standards and in order to match the original MOC (11069).

INSTRUMENTATION:

- ☐ Alarm Objective Analysis
- ☐ Analyzer Instruments
- ☐ Chevmon
- ☑ Control Valves
- ☐ DCS
- ☐ Egatrol
- ☐ Electrical One-lines
- ☐ Field Installation
- ☐ Flow Measurements
- ☐ Honeywell
- ☐ Honeywell Process Simulator
- ☐ Instrument Seals, Purges, and Winterizing
- ☐ Level Measurements
- ☐ Loop Diagrams
- ☐ P&ID Change due to New / Modified equipment
- ☐ P&ID's Change - Field condition not matching existing P&ID
- ☐ Pressure Measurements
- ☐ Process Alarms
- ☐ Process Control
- ☐ Relief Systems
- ☐ Shutdown Systems
- ☐ Temperature Measurements

SUMMARY OF REVIEW*

As a Result of the HSE this morining we will look into the posiblility of adding an air tank to the change to give operators time to react before the Valve opens in case of loss of instrument air

*When possible include copies of documents referenced in the summary.

ENVIRONMENTAL REGULATORY REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number: 23794
Filing Reference:
Person Responsible: Elliott, Brad B.
Completed By: Elliott, Brad B.
Date Completed: 8/3/2011

Project/Equipment Title:

Change JHT Depressuring Valve (36HV021) to be Fail Open

Check that all Apply:

Chevron:

- ☐ **Yellow Book**
- ☐ **Correction or Alternations to Refinery Utility System (RI-503)**

CITY OF RICHMOND

- ☐ **CEQA (EIR's, etc**
- ☐ **City of Richmond Conditional Use Permits (Land use and Hazardous Materials)**

Regulatory

- ☐ **BAAQMD Air Regulations Permits (including Title V)**
- ☐ **BAAQMD Air Regulations: Additions, modifications, or deletions of VOC Components/Equipment (reg. 8-18 LDAR Program - equipment leaks/fugitive emissons)**
- ☐ **BAAQMD Air Regulations: Wastewater System components - reg 8-8 and NSPS QQQ (process drains, catch basins, manholes, sumps, cleanouts, oil-water separators)**
- ☐ **BAAQMD Air Regulations: Storage Tanks**
- ☐ **BAAQMD Air Regulations: Internal Combustion Engines**
- ☐ **BAAQMD Air Regulations: Flares**
- ☐ **BAAQMD Air Regulations: Boiler, Steam Generators, Process Heaters & Gas Turbines**
- ☐ **BAAQMD Air Regulations: SRU, Tail gas, or H2S Unit Changes**
- ☐ **BAAQMD Air Regulations: Long Wharf (Marine Terminal)**
- ☐ **Department of Transportation (DOT)**

SUMMARY OF REVIEW*

No environmental regulatory issues.

*When possible include copies of documents referenced in the summary.

ENVIRONMENTAL REGULATORY REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number: 23794
Filing Reference:
Person Responsible: Elliott, Brad B.
Completed By: Elliott, Brad B.
Date Completed: 8/3/2011

Project/Equipment Title:

Change JHT Depressuring Valve (36HV021) to be Fail Open

- ☐ **EPA Benzene NESHAP (National Emissions Standards for Hazardous Air Pollutnats) (process vents, storage tanks, watewater systems, transfer operations, fugitive emissions**
- ☐ **EPA Benzene Waste Operations NESHAP (BWON)**
- ☐ **EPA MACT (Maximum Achievable Control Technology) Standards and Subparts (process inits, storage tanks, wastewater system, fugitive emissions)**
- ☐ **EPA NSPS (New Source Performance Standards) and Subparts (storage tanks, flares, wastewater components, fugitive emissions, boilers, process heaters)**
- ☐ **Chemical Inventory / Hazardous Materials Business Plan (e.g. New Chemicals:RI-313)**
- ☐ **Risk Management and Prevention Plan (RMPP)**
- ☐ **RWQCB Waste Discharge Orders, EPA Consent Agreement Sites**
- ☐ **RWQCB NPDES Regulations/Permits**
- ☐ **RWQCB SB-1050, Waste Discharge Requirements (WDR)**
- ☐ **Spill Prevention Control and Counter Measures Plan (SPCC Plan)**
- ☐ **Waste Regulations and Permit**
- ☐ **Wharf and Shoreline Permitting related agencies (BCDC, Army Corps, SLC, USCG, OSPR, EPA)**
- ☐ **Permit to Build and Remove Wells, County Permit Required**
- ☐ **Activities impacting groundwater protection system (GPS) or WDO sites**

Yes	No	
☐	☑	**Any additions, modifications, or deletions of VOC Components/Equipment (including drains or wastewater components) that will change VOC identification/tag**

*When possible include copies of documents referenced in the summary.

BUILDING PERMITS REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number	23794
Filing Reference	
Person Responsible	Tuma, Dennis A.
Completed By	Tuma, Dennis A.
Date Completed	8/3/2011

Project/Equipment Title:

Change JHT Depressuring Valve (36HV021) to be Fail Open

SUMMARY OF REVIEW*

Based on the information provided, no City of Richmond building permit is required.

*When possible include copies of documents referenced in the summary.

INSPECTION REVIEW CHECKLIST

You have been assigned a Inspection Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number: 23794

Completed On: 8/4/2011

Completed By: Bosworth, Gregory A.

Person Responsible: Bosworth, Gregory A.

Project/Equipment Description:

JHT depressuring valve (36HV021) needs to be changed from fail closed to fail open upon loss of air in order to meet best practices standards and in order to match the original MOC (11069).

Yes	No	Plant Protection/Security Review
☐	☑	City Fire-Plan Review is Mandato
☐	☑	City Fire-Permit is Mandato
☐	☑	City Acceptance Test is Mandato
☑	☐	Office of Fire Prevention Review On

The scope of work has been reviewed by the Chevron Fire Marshal. Scope of work does not constitute a change in fire protection.

*When possible include copies of documents referenced in the summary.

HEALTH & SAFETY EVALUATION

Date Issued:	8/3/2011	**Maximo Number:**	
ABU:	D&R	**EWO Number**	
Plant:	JHT		
Section 2 Reviewer:	Reyes, Lorraine		
Project/Equipment Title:	Change JHT Depressuring Valve (36HV021) to be Fail Open		
Description:	JHT depressuring valve (36HV021) needs to be changed from fail closed to fail open upon loss of air in order to meet best practices standards and in order to match the original MOC (11069).		

MOC Number	23794
Filing Reference	
Person Responsible	Peterson, Paul M.
Completed By	Peterson, Paul M.
Date Completed	8/15/2011

Step 1: ☐ **Notify USW** ☐ **USW Representation Present** **USW Representative:**

Worker's Committee Member/Steward's comments if unable to attend:

☐ **Notify Trainer** ☐ **TrainerRepresentation Present** **Training Representative:** crowe

Step 2: **Involve: Operations, Maintenance, Technical and others with appropriate expertise relevant to the change (CRTC, Contractors, etc)**

Attendees: Roger Klemens, Gary Cobarruviaz, Charles Coday; Sean Subia, Paul Peterson, Gerald Lee, Brad Petzak, Sam Jaurgei, Chris Smith, Josh Htut, Pat Murphy; Hannah Wallace

Step 3: **Think about the task at hand. Discuss the existing situation. Discuss the change. Discuss the impact of the change on the existing situation. Determine the training requirements for this change.**

Step 4: **Training Type:** 2

Develop a list of concerns, consider your options, consider your following:

*H2S *NH3 *Acid *Caustic *Benzene *Fall Protection *Staging *Scott Air *PPE *Hot Work *Confined Space Entry *Evacuation Plan *Safety Operator

Concern	Consequence	Mitigation	Proceed Safely
Valve goes open on loss of air during normal ops	Flaring	Existing alarms for low air pressure at HIC21 adequate	Yes
Valve goes open on loss of air during normal ops	Loss of K-200 suction pressure, surging and K-200 S/D. No flow for reactor cool down or hot strip, Catalyst damage	Consider fail "locked" or add resovoir bottle if locked is not an option	Yes

HSE Action Items

Additional Comments

Level 2 training to include review of BIN requirement for fail open and dump valve justification. Also cover any changes to routine duties for valve testing.

PROCEDURE REVIEW CHECKLIST

You have been assigned a Procedure Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number	23794
Filing Reference	
Person Responsible	Nelson, William
Completed By	Nelson, William
Date Completed	12/20/2011

Project/Equipment Description:

JHT depressuring valve (36HV021) needs to be changed from fail closed to fail open upon loss of air in order to meet best practices standards and in order to match the original MOC (11069).

- ☐ Alarm Procedures
- ☐ Any Special or unique hazards
- ☐ COD/Ops Monitor
- ☐ Consequences of deviation
- ☐ Control measure to be taken if physical contact or airborne exposure occurs.
- ☐ Precautions necessay to prevent exposure, including administrative controls, engineering controls, and personnel protective equipment.
- ☐ properties of, and hazards presented by, the chemicals and operation of the process.
- ☐ References to additional procedures, such as Safe Work Practices
- ☐ Routine Duties
- ☐ Safety system and their functions
- ☐ Steps required to correct and/or avoid deviation

Steps fo each operatong Phase

- ☑ Emergency
- ☐ Normal
- ☐ Start-Up/Shutdown
- ☐ Temporary

SUMMARY OF REVIEW*

Revised JHT Emergency Procedure JHTE205 to show 36HV021 will not fail in closed position but will fail in open.

*When possible include copies of documents referenced in the summary.

Stage Two Training and Communication Review

1/29/2013 10:12:23 AM

MOC No: 23794

Date Completed:

Completed By:

Person Responsible: Jennings, Brian L.

Project/Equipment Title:

Change JHT Depressuring Valve (36HV021) to be Fail Open

Summary of Review:

2 stages of training:
1st - actuator changed for fail closed to fail open. COMPLETE via email PMPE 4/10/12 but not signed off until 2nd stage of training is complete. 1st stage email is for a sub-system PSSR that includes valve actuator.
2nd - addition of air reservoir and updated routine duty for testing, alarms. This will be Type 2 training.

- ☐ **Identify the affected employees.**
  - * **Maintenance and Technical affected?**
  - * **Employee who will require training to start up the change based on the level of training.**
  - * **Employees who will receive training after the start up BUT before they can perform work affected by the change**
- ☐ **Procedures have been modified/written (Ops/SSO/Trainer)**
- ☐ **Identify the affected employees..**
  - * **Lesson plan cover sheet (includes training objective statement and list of affected employees)**
  - * **Procedural changes (Standing Orders, mark-ups)**
  - * **Flow daigrams (final or mark-ups)**
- ☐ **Determine level of training**
- ☐ **Training has been scheduled**
- ☐ **Affected employees have been trained in order to start up the change.**

APPENDIX III
PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

Passport No:
EWO No.:
MOC PSSR.: 23794.001

MOC Number 23794
Filing Reference
Person Responsible Reyes, Lorraine
Completed By
Date Completed

Project/Equipment Description:

Change JHT Depressuring Valve (36HV021) to be Fail Open

Subsystem: Complete conversion with air resovoir

NOT The PSSR facilitator shall involve employees with expertise in process operations, maintenance, and engineering, based upon their experience and understanding of the process system being evaluated.

The following requirements for PSSR shall be addressed: **Approved by:** **Date**

1. Has the equipment and construction been completed in accordance with the critical design specifications?
   Some examples of how this may be accomplished are:
   * Review of equipment quality assurance and inspection records.
   * Review of construction inspection records.
   * P & ID "check" after mechanical completion, and facility "walk-through" inspection.

   Justification:

2. Are Safety, operating, manintenance, and emergency procedures in place and adequate?
   * The phrase "in place and adequate" means: written, reviewed, approved, and accessible to employees requiring the procedures in their work.
   * This does not prevent the use of "mark-up" procedures to satisfy the requirement, but these must undergo the same review and approval and training interaction as would "the final version" of the same procedure and would require rigorous control.

   Justification:

3. Has the communication or training of affected operating, maintenance, or contract workers been completed?
   * Maintenace employees, contractors, and other employees whose work is affected by the change must be informed of the change and training in the impact on their job tasks before the changed equipment is started up.

   Justification:

4. Have the quality assurance goals of mechanical integrity been met?
   * Ensure that changes are suitable for the intended service.
   * Ensure that the quality of the work is acceptable.
   * Ensure that the quality of the Leak Seal is acceptable.

   Justification:

5. Have all recommendations resulting from PHA's or HSE's been addressed of resolved
   * Ensure tall Recommendations have been documented as addressed or resolved

APPENDIX III

PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

Passport No:
EWO No.:
MOC PSSR.: 23794.001

MOC Number 23794
Filing Reference
Person Responsible Reyes, Lorraine
Completed By
Date Completed

Project/Equipment Description:

Change JHT Depressuring Valve (36HV021) to be Fail Open

Subsystem: Complete conversion with air resovoir

Justification:

Are there any safety-related exceptions encountered during the PSSR that require follow-up after started up? ☐ **Yes**

Miscellaneous Comments:

Exception	*Owner*	*Completed By*	*Completed On*	*Notified*

APPENDIX III
PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

Passport No:
EWO No.:
MOC PSSR.: 23794.002

MOC Number 23794
Filing Reference
Person Responsible Reyes, Lorraine
Completed By
Date Completed

Project/Equipment Description:

Change JHT Depressuring Valve (36HV021) to be Fail Open

Subsystem: Valve actuator

NOT The PSSR facilitator shall involve employees with expertise in process operations, maintenance, and engineering, based upon their experience and understanding of the process system being evaluated.

The following requirements for PSSR shall be addressed:	**Approved by:**	**Date**
1. Has the equipment and construction been completed in accordance with the critical design specifications? Some examples of how this may be accomplished are: * Review of equipment quality assurance and inspection records. * Review of construction inspection records. * P & ID "check" after mechanical completion, and facility "walk-through" inspection. **Justification:** Actuator change out done by shop	Peterson, Paul M.	4/10/2012
2. Are Safety, operating, manintenance, and emergency procedures in place and adequate? * The phrase "in place and adequate" means: written, reviewed, approved, and accessible to employees requiring the procedures in their work. * This does not prevent the use of "mark-up" procedures to satisfy the requirement, but these must undergo the same review and approval and training interaction as would "the final version" of the same procedure and would require rigorous control. **Justification:** yes	Peterson, Paul M.	4/10/2012
3. Has the communication or training of affected operating, maintenance, or contract workers been completed? * Maintenace employees, contractors, and other employees whose work is affected by the change must be informed of the change and training in the impact on their job tasks before the changed equipment is started up. **Justification:** email for this subsystem only	Peterson, Paul M.	4/10/2012
4. Have the quality assurance goals of mechanical integrity been met? * Ensure that changes are suitable for the intended service. * Ensure that the quality of the work is acceptable. * Ensure that the quality of the Leak Seal is acceptable. **Justification:** shop qa	Peterson, Paul M.	4/10/2012
5. Have all recommendations resulting from PHA's or HSE's been addressed of resolved * Ensure tall Recommendations have been documented as addressed or resolved	Peterson, Paul M.	4/10/2012

APPENDIX III
PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

Passport No:
EWO No.:
MOC PSSR.: 23794.002

MOC Number 23794
Filing Reference
Person Responsible Reyes, Lorraine
Completed By
Date Completed

Project/Equipment Description:

Change JHT Depressuring Valve (36HV021) to be Fail Open

Subsystem: Valve actuator

Justification: yes

Are there any safety-related exceptions encountered during the PSSR that require follow-up after started up? ☐ **Yes**

Miscellaneous Comments:

Exception	*Owner*	*Completed By*	*Completed On*	*Notified*